DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-017902
Date Inspected: 04-Nov-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 1000
OSM Departure Time: 1830
Location: Jobsite

CWI Name:	See below			**CWI Present:**	☑ Yes	☐ No	
Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: SAS OBG

Summary of Items Observed:

On this date CALTRANS OSM Quality Assurance Inspector (QAI) Bert Madison was present at Yerba Buena Island in California between the times noted above for observations relative to the work being performed by American Bridge/Fluor Enterprises (AB/F) personnel at the locations noted below.

1). OBG Field Welding of East Line Lifting Rod Access Penetration Inserts (SMAW)
2). OBG Field Splice of Ventilation Access Insert Weld at 5E-PP29.5-E2-S – (SMAW)
3). OBG Field Splice of Ventilation Access Insert Weld at 3E-PP23.5-E5-NE – (SMAW)
4). OBG Field Splice 7E/8E Weld ID: A1 & A2, Face A – (SMAW R-3 Repairs)

1). OBG Field Welding of East Line Lifting Rod Access Penetration Insert (SMAW)
Interior: OBG 1E-PP9.5-E3-weld 1
The QAI periodically observed repair welding in the A deck at PP9.5 of the Lifting Rod Access Penetration Welds. Repair welding was per the Shielded Metal Arc Welding (SMAW) process in the 4G (overhead) position. The QAI observed AB/F approved welder Darcell Jackson (ID 9967) performing welding of two excavated areas at PP9.5 weld E3-1. QC Inspector John Pagliero was periodically present to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1000 Repair rev. 2. The QAI periodically observed QC Inspector John Pagliero performing Magnetic Particle Testing (MT) of the excavation area prior to repair welding at this location. The QAI observed that the performance and evaluation of the MT appeared to comply with the MT procedure identified as SE-MT-CT-D1.5-101 Rev. 4. Welding was completed from the interior at E3-1 and the QAI observed that the work appeared to be in general compliance with contract documents.

Exterior: OBG 1E-PP9.5-E3-weld 1
The QAI periodically observed AB/F approved welder Rick Clayborn (ID 2773) performing air carbon arc gouging to excavate one UT rejectable indication from the exterior surface of OBG 1E-PP9.5-E3-weld 1. See photo below.

Exterior: OBG 1E-PP9.5-E3-weld 1
The QAI periodically observed repair welding in the A deck at PP9.5 of the Lifting Rod Access Penetration Welds. Repair welding was per the Shielded Metal Arc Welding (SMAW) process in the 1G (flat) position. The QAI observed AB/F approved welder Darcell Jackson (ID 9967) performing welding of one excavated areas at PP9.5 weld E3-1. QC Inspector Patrick Swain was periodically present to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1000 Repair rev. 2. The QAI observed QC Inspector Patrick Swain performing Magnetic Particle Testing (MT) of the excavation area prior to repair welding at this location. The QAI observed that the performance and evaluation of the MT appeared to comply with the MT procedure identified as SE-MT-CT-D1.5-101 Rev. 4. Welding was completed from the exterior at E3-1 and the QAI observed that the work appeared to be in general compliance with contract documents.

Exterior: OBG 4E-PP27- E4-welds 3 & 1
The QAI periodically observed welding per the Shielded Metal Arc Welding (SMAW) process in the 1G (flat) position to restore the Lifting Rod Access Penetration in the A deck at PP27. The QAI observed AB/F approved welder Melvin Ivy (ID 8309) performing fill and cover passes at 4E PP27 weld E4-3, and fit-up, tack welding, and root passes at 4E PP27 weld E4-1. The QAI observed that the QC Patrick Swain and AB/F Welding Supervisor Scott were both present at the welding location and the QAI later had a conversation with QC Patrick Swain. See Summary of Conversations below. After the insert weld at 4E-PP27- E4-weld-1 was removed and the insert was again fit-up, the QAI periodically observed welder Melvin Ivy (ID 8309) performing root and fill passes. QC Inspector Patrick Swain was periodically present to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1070. The QAI observed that the work at this location appeared to be in general compliance with contract documents.

2). OBG Field Splice of Ventilation Access Insert Weld at 5E-PP29.5-E2-S – (SMAW)
The QAI periodically observed the welding per the Shielded Metal Arc Welding (SMAW) process in the 1G (flat) position to restore the Ventilation Access Insert at 5E-PP29.5-E2-S. The QAI observed that AB/F approved welder Jin Pei Wang (ID 7299) performed welding from the exterior of the OBG at this location. QC Inspector Patrick Swain was periodically present to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1010 rev 1. The QAI observed that welding of fill passes was in process and the work at this location appeared to be in general compliance with contract documents.

3). OBG Field Splice of Ventilation Access Insert Weld at 3E-PP23.5-E5-NE – (SMAW)
The QAI periodically observed the welding per the Shielded Metal Arc Welding (SMAW) process in the 4G (overhead) position to restore the Ventilation Access Insert at 3E-PP23.5-E5-NE. The QAI observed that AB/F approved welder James Zhen (ID 6001) performed back welding from the interior of the OBG (to serve as backing for the welding from the exterior of the OBG) at this location. QC Inspector John Pagliero was periodically present

to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1010 rev 1. Welding was in process at this location and the QAI observed that the work appeared to be in general compliance with contract documents.

4). OBG Field Splice 7E/8E Weld ID: A1 & A2, Face A – (SMAW R-3 Repairs)
The QAI periodically observed AB/F approved welder Fred Kaddu (ID 2188) performing grinding to excavate R-3 Ultrasonic Testing (UT) repair locations and subsequently performing welding per the Shielded Metal Arc Welding (SMAW) process in the 1G (flat) position of OBG Field Splice 7E/8E Weld ID: A1 & A2. See photo below. QC Inspector Steve McConnell was present to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1000 Repair. Mr. McConnell also performed Magnetic Particle Testing (MT) of the excavated areas prior to the repair welding. The QAI observed that the performance and evaluation of the MT appeared to comply with the MT procedure identified as SE-MT-CT-D1.5-101 Rev. 4. The QAI observed that Mr. Kaddu completed welding of (2) two excavations with the following dimensions at the following Y locations: Weld A1 - Y = 565mm, Length = 115mm, Depth = 20mm and Width = 30mm and Weld A2 - Y = 4775mm, Length = 125mm, Depth = 14mm and Width = 30mm. The QAI observed that work at these locations appeared to be in general compliance with contract documents. The QAI also observed a repair excavation (R-2) located at A5 – Y = 4595mm, Length = 230mm and Depth = 20mm and Width = 24mm. This area was excavated on10-28-10 and the excavation is through-wall alongside the backing bar for a portion of the excavation length.

Summary of Conversations:
From item 1 above:
The QAI in conversation with QC Inspector Patrick Swain was informed that while performing fit-up inspection he observed that the insert was 1mm to 2 mm above the A deck. Mr. Swain stated that he spoke with the welding supervisor who agreed to remove the insert and re-fit.

Other conversations on this date with Quality Control Inspectors were general in nature and pertained to locations of welding and QC activities.

Comments
This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammed Fatemi (916) 813 3677, who represents the Office of Structural Materials for your project.

WELDING INSPECTION REPORT

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Inspected By:	Madison,Bert	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer